

ORDINANCE NO. 231

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LAKE FOREST CALIFORNIA, AMENDING CHAPTERS 8.02, 8.06, 8.14, 8.16, and 8.20 OF TITLE 8 OF THE LAKE FOREST MUNICIPAL CITY CODE AND ADOPTING BY REFERENCE THE 2010 EDITION OF THE CALIFORNIA BUILDING STANDARDS CODES (CALIFORNIA CODE OF REGULATIONS, TITLE 24), CONSISTING OF THE CALIFORNIA BUILDING CODE, CALIFORNIA RESIDENTIAL CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA MECHANICAL CODE, AND CALIFORNIA PLUMBING CODE

WHEREAS, pursuant to California Government Code section 50022.1 *et seq.* the City of Lake Forest ("City") may adopt by reference the California Building Standards Code, 2010 Edition as provided in Title 24 and 25 of the California Code of Regulations; and

WHEREAS, the California Building Standards Commission ("Commission") adopted the 2010 California Building Standards Code, which came into effect on January 1, 2011; and

WHEREAS, California Health & Safety Code sections 17958.5 and 18941.5 authorize cities and counties to modify the California Building Standards Code by adopting more restrictive standards and modifications if such standards and modifications are accompanied by express findings that they are reasonably necessary because of local climatic, geological, or topographical conditions; and

WHEREAS, based upon the recommendations of the Building Official, the City Council finds that the proposed amendments to the 2010 California Building Standards Code ("amendments") set forth in this ordinance are more restrictive than the standards adopted by the California Building Standards Commission, would decrease the potential incidence of property damage, injury, and death due to fires and earthquakes, and are reasonable and necessary to mitigate local climatic, geological, or topographical conditions; and

WHEREAS, the City held a public hearing on August 2, 2011 at which time all interested persons had the opportunity to appear and be heard on the matter of adopting the California Building Standards Code as amended herein; and

WHEREAS, the City published notice of the aforementioned public hearing pursuant to California Government Code Section 6066 on July 18, 2011 and July 25, 2011; and

WHEREAS, any and all other legal prerequisites relating to the adoption of this Ordinance have occurred.

**THE CITY COUNCIL OF THE CITY OF LAKE FOREST, CALIFORNIA,
DOES ORDAIN AS FOLLOWS:**

SECTION 1. Findings. To the extent that the following changes and modifications to the 2010 California Building Standards Code are deemed more restrictive than the standards contained in the 2010 California Building Standards Code, thus requiring that findings be made pertaining to local conditions to justify such modifications, the City Council hereby finds and determines that the following findings are reasonably necessary because of local climatic, geologic, or topographic conditions, and adopts the findings provided below to support the modifications to the 2010 California Building Standards.

I. Climatic Conditions

- A. The jurisdiction of Lake Forest is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 M.P.H. or greater, are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires are also prone to disrupt utility services throughout the County. Obstacles generated by a strong wind, such as fallen trees, street lights, and utility poles, and the requirement to climb 75 feet vertically up flights of stairs will greatly impact the response time to reach an incident scene. Additionally, there is a significant increase in the amount of wind force at 60 feet above the ground. Use of aerial type fire fighting apparatus above this height would place rescue personnel at increased risk of injury.
- B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange County fire Authority's ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the County.
- C. Water demand in this densely populated area far exceeds the quantity supplied by natural precipitation; and although the population continues to grow, the already-taxed water supply does not. California is projected to increase in population by nearly 10 million over the next quarter of a century with 50 percent of that growth centered in Southern

California. Due to storage capacities and consumption, and a limited amount of rainfall, future water allocation is not fully dependable. This necessitates the need for additional and on-site fire protection features.

It would also leave tall buildings vulnerable to uncontrolled fires due to a lack of available water and an inability to pump sufficient quantities of available water to floors in a fire.

- D. These dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by as much as 50 to 75 percent.

II. Topographical conditions

- A. Natural slopes of 15 percent or greater generally occur throughout the foothills of Orange County. The elevation change cause by the hills creates the geological foundation on which communities within Orange County are built and will continue to build. With much of the populated flatlands already built upon, future growth will occur on steeper slopes and greater constraints in terrain.
- B. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange County.
- C. These topographical conditions combine to create a situation which places fire department response time to fire occurrences at risk, and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

III. Geological Conditions

The Orange County region is a densely populated area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Earthquake faults run along the northeast and southwest boundaries of Orange County. The Newport-Inglewood Fault, located within Orange

County was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude) which took 120 lives and damaged buildings in an area from Laguna Beach to Marina Del Rey to Whittier. In December 1989, another earthquake occurred in the jurisdiction of Irvine at an unknown fault line. Regional planning for reoccurrence of earthquakes is recommended by the state of California, Department of Conservation.

- A. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. With the probability of strong aftershocks there exists a need to provide increased protection for anyone on upper floors of buildings. The October 17, 1989, Santa Cruz earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants. State Department of Conservation noted in their 1988 report (Planning Scenario on a Major Earthquake on the Newport-Inglewood Fault Zone, page 59), "unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe."
- B. Road circulation features located throughout the County also make amendments reasonably necessary. Located throughout the County are major roadways, highways and flood control channels that create barriers and slow response times. Hills, slopes, street, and storm drain design accompanied by occasional heavy rainfall, causes roadway flooding and landslides and at times may make an emergency access route impassable. There are areas in Orange County that naturally have extended emergency response times that exceed the 5 minute goal.
- C. Soils throughout the County possess corrosive properties that reduce the expected usable life of water services when metallic pipes in contact with soils are utilized.
- D. Portions of the County contain active or former oil production fields. These areas contain a variety of naturally occurring gasses, liquids, and vapors. These compounds present toxicity or flammability hazards to

building occupants. Evaluation of these hazards and the risks they pose to development is necessary to implement appropriate mitigation.

Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets and the expected infrastructure damage inherent in the seismic zone described above, it is prudent to rely on automatic fire sprinkler systems to mitigate extended fire department response time and keep fires manageable with reduced fire flow (water) requirements for a given structures. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange County Fire Authority.

IV. Roofing

Untreated wood roofs cause or contribute to serious fire hazard and to the rapid spread of fires when such fires are accompanied by high winds. Pieces of burning wooden roofs become flying brands and are carried by the wind to other locations and thereby spread fire quickly. Recent Grand Jury Report findings support this concern.

V. Swimming Pools

Swimming Pool accidents are a preventable tragedy. The warm, dry climate is conducive to swimming pools which creates a higher probability of child drownings where pools are unprotected.

VI. Administrative

This amendment is necessary for administrative clarification, and does not modify a building standard pursuant to California Health & Safety Code Sections 17958, 17985.7 and/or 18941.5. This amendment establishes administrative standards for the effective enforcement of the building standards in the City of Lake Forest.

The findings above are applicable to amendments to the 2010 California Building Code, California Residential Code, California Electrical Code, California Mechanical Code, and California Plumbing Code, as detailed in the following tables:

Code Section	Section Title	Finding
Chapter 8.12	Building Code	

105.2 (4)	Retaining Walls	Existing
105.3.2	Expiration of Plan Review	Existing
105.5	Expiration	Existing
109	Fees	Existing
109.1	General	Existing
109.2	Permit Fees	Existing
109.3	Plan Review Fees	Existing
109.4	Investigation Fees	Existing
109.4.1	Investigation	Existing
109.4.2	Fee	Existing
109.5	Fee Refunds	Existing
109.7	Reinspections	Existing
110.3	Temporary Certificates	Existing
114	Violations	Existing
117	Underground Utilities Required	Existing
202	Definitions (Floor Area Fire Sprinklers)	Existing
202	Definition HAZARDOUS FIRE AREA	Admin
202	Definition HIGH-RISE BUILDING	Existing
202	Definition FLOW LINE	Admin
403	High-Rise	Existing
403.1	Applicability	Existing
403.1.1	Definitions (High-Rise)	Existing
[F]403.4.7.2	Standby Power Loads	Existing
[F]403.4.8.1	Emergency Loads	Existing
412.2	Definitions	Existing
412.7.5	Emergency Helicopter Landing Facility (EHLF)	Existing
412.7.5.1	General	Existing
412.7.5.2	Rooftop Landing Pad	Existing
412.7.5.3	Approach-Departure Path	Existing
412.7.5.4	Safety Area	Existing
412.7.5.5	Safety Net	Existing
412.7.5.6	Take-off and Landing Area	Existing
412.7.5.7	Wind Indicating Device	Existing
412.7.5.8	Special Markings	Existing
412.7.5.9	EHLF Exits	Existing
412.7.5.10	Standpipe Systems	Existing
412.7.5.11	Fire Extinguishers	Existing
412.7.5.13	EHLF	Existing
903.2.8	Group R (Residential Sprinklers)	Existing
[F]905.4	Location of Class I Standpipe Hose Connections	Existing
907.2.13	High-Rise Buildings (Fire Alarm)	Existing

[F]907.3.1	Duct Smoke Detectors	Existing
907.5.2.2	Emergency Voice/Alarm Communication System	Existing
907.6.3.2	High-Rise Buildings (Fire Alarm Zoning)	Existing
[F]910.3.2.2	Sprinkler Buildings	Existing
Table 1505.1	Minimum Roof Classification	Existing
1505.1.3	Roof Coverings Within All Other Areas	Existing
1614.1.1	Minimum Seismic Base Shear	Existing
3109.4	Definition of Private Swimming Pool	Existing
3109.4.2.2	Pool Construction Safety Features	Existing
3109.4.4.1	Definition	Existing
3109.4.4.2	Construction Permit, Safety Features	Existing
Ch 35 NFPA 13	Commercial Sprinkler Systems	Existing
6.8.3	Fire Department Connections	Existing
8.3.3.1	Fire Sprinklers in Shell Buildings	Existing
8.17.2.4.6	Fire Department Connections on Street Sides	Existing
11.1.1.2	Sprinklers in Buildings of Undetermined Use	Existing
11.2.3.1.1.1	Available Water Supply	Existing
22.1.3 (43)	Size and Location of Hydrants	Existing
Ch 35 NFPA 13R	Multi-Family Sprinkler Systems (Apartments, Townhomes to Four Stories Tall)	Existing
6.16.1	Local Water-Flow Alarms	Existing
6.6.6	Sprinklers in Penthouse Equipment Rooms	Existing
6.6.9	Sprinklers in Attics	Existing
Ch 35 NFPA 13D	Residential Sprinkler Systems (Single-Family Homes)	Existing
4.1.5	Stock of Spare Sprinklers	Existing
4.1.5.1	Stock Maintained on Premises	Existing
4.1.5.2	Sprinkler Type and Temperature	Existing
4.1.5.3	Sprinkler Storage	Existing
4.1.5.4	Sprinkler Wrench	Existing
7.1.2	System Piping Control Valve	Existing
7.3.1	Water Pressure Gauge	Existing
7.6	Alarms	Existing
8.6.4.2	Attic Sprinklers	Existing
Ch 35 NFPA 14	Standpipe Systems	Existing
6.4.5.4.1	Fire Department Connection	Existing
7.3.1.1	Hose Connection Height	Existing
Ch 35 NFPA 24	Underground Systems	Existing
5.9.1.3	Fire Department Connection	Existing
5.9.1.3.1	Sprinkler Density Design	Existing
5.9.1.3.2	Fire Department Connection Location	Existing

10.3.5.2	Bolted Joint Accessories	Existing
10.3.5.3	Bolts Pipe Joint Assembly Material	Existing
10.6.3.1	Fire Service Main Entrance	Existing
10.6.5	Protection Against Damage	Existing
Chapter 10.6 Fire Protection (See NFPA 101)		
R105.3.2	Expiration of Plan Review	Admin
R105.5	Expiration	Admin
R108.1	Payment and Schedule of Fees	Admin
R108.2	Plan Review Fees	Admin
R108.3	Permit Fees	Admin
R108.4	Related Fees	Admin
R108.5	Fee Refunds	Admin
R108.6	Investigation Fees	Admin
R108.6.1	Investigation	Admin
R108.6.2	Fees	Admin
R110.4	Temporary Certificate	Admin
R110.5	Reinspections	Admin
R112.3	Establishment	Admin
R113.1	Violations	Admin
R202	Definitions FLOWLINE	Admin
R202	Definitions HAZARDOUS FIRE AREA	Admin
R313.1	Townhouse automatic fire sprinklers	Admin
R313.2	One and Two Family Fire Sprinkler Systems	Admin
R902.1	Class A or B roofs	Admin
R902.1.3	Minimum Class B roof	Admin
R902.2	Class A or B Treated Roofs	Admin
Chapter 44 NFPA 13	Installation of Sprinkler Systems	Admin
6.8.3	Fire Department Connections	Existing
8.3.3.1	Fire Sprinklers in Shell Buildings	Existing
8.17.1.1.1	Residential Water Flow	Existing
8.17.2.4.6	Fire Department Connections on Street Sides	Existing
11.1.1.2	Sprinklers in Buildings of Undetermined Use	Existing
11.2.3.1.1.1	Available Water Supply	Existing
22.1.3 (43)	Size and Location of Hydrants	Existing
Ch 44 NFPA 13R	Multi-Family Sprinkler Systems (Apartments, Townhomes to Four Stories Tall)	Existing
6.16.1	Local Water-Flow Alarms	Existing
6.6.6	Sprinklers in Penthouse Equipment Rooms	Existing
6.6.9	Sprinklers in Attics	Existing
Ch 44 NFPA 13D	Residential Sprinkler Systems (Single-Family Homes)	Existing
4.1.5	Stock of Spare Sprinklers	Existing

4.1.5.1	Stock Maintained on Premises	Existing
4.1.5.2	Sprinkler Type and Temperature	Existing
4.1.5.3	Sprinkler Storage	Existing
4.1.5.4	Sprinkler Wrench	Existing
7.1.2	System Piping Control Valve	Existing
7.3.1	Water Pressure Gauge	Existing
7.6	Alarms	Existing
8.6.4.2	Attic Sprinklers	Existing
Ch 44 NFPA 14	Standpipe Systems	Existing
6.4.5.4.1	Fire Department Connection	Existing
7.3.1.1	Hose Connection Height	Existing
Ch 44 NFPA 24	Underground Systems	Existing
5.9.1.3	Fire Department Connection	Existing
5.9.1.3.1	Sprinkler Density Design	Existing
5.9.1.3.2	Fire Department Connection Location	Existing
10.3.5.2	Bolted Joint Accessories	Existing
10.3.5.3	Bolts Pipe Joint Assembly Material	Existing
10.6.3.1	Fire Service Main Entrance	Existing
10.6.5	Protection Against Damage	Existing
Chapter 8.02 California Building Code		
89.108.5.2	Enforcement	Existing
89.108.4.2	Fees	Existing
89.108.11	Penalties	Existing
Chapter 102 Building Maintenance Code		
102.3	Violation and Penalties	Existing
103.4	Fees	Existing
Chapter 115 Building Mechanical Code		
115	Fees	Existing
116.6	Reinspection	Existing

SECTION 2. Chapter 8.02 of the Lake Forest Municipal Code is hereby amended and restated in its entirety to read as follows:

"Chapter 8.02 California Building Code

Article I. General

8.02.001 Adoption of California Building Code by reference.

There is adopted by the Lake Forest City Council for the purpose of prescribing regulations for the erection, construction, enlargement, alteration, repair, improving, removal, conversion, demolition, occupancy, equipment, use, height,

area and maintenance of all buildings and structures California Building Code, 2010 Edition, including Chapter 1, together with the amendments provided in this chapter, is hereby adopted by reference as the Building Code of the City of Lake Forest, regulating the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, area and maintenance of all buildings and/or structures in the City.

8.02.020 Amendments to the California Building Code

The 2010 California Building Code is hereby amended as follows:

- A. Chapter 1 Division II -- Section 105.2, Item 4 in of the California Building Code is amended to read as follows:

4. Retaining walls which are not over 4 feet (314.25 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.

Exception: Walls and fences less than six (6) feet in height which are required as a condition of project approval are required to have permits.

- B. Chapter 1 Division II – Section 105.3.2 is amended to read as follows

105.3.2 Expiration of Plan Review. Applications for which no permit is issued within 180 days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action by the applicant for a period not exceeding 180 days on request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay the required fees.

- C. Chapter 1 Division II Section 105.5 is amended to read as follows:

Section 105.5 Expiration. Every permit issued by the Building Official under the provisions of this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within one hundred eighty (180) days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of one hundred eighty (180) days. Before such work can be recommenced a new permit shall be first obtained to do so,

and the fee therefore shall be one-half the amount required for a new permit for such work; provided, however, that:

1. No changes have been made or will be made in the original plans and specifications for such work; and
2. Such suspension or abandonment has not exceeded one (1) year; and
3. A reendorsement of the compliance of the plans with the applicable regulations, by the Director of Development Services, shall be obtained.

In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee.

Any permittee holding an unexpired permit may apply for an extension of the time within which work may commence under that permit when the permittee is unable to commence work within the time required by this section for good and satisfactory reasons. The Building Official may extend the time for action by the permittee for a period not exceeding one hundred eighty (180) days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. Such written request shall be submitted no later than sixty (60) days after expiration of the permit.

D. Chapter 1 Division II Section 109 is amended to read as follows:

SECTION 109 FEES

109.1 General. A fee as established by Resolution of the City Council shall be paid for each permit at time of issuance.

109.2 Permit Fees. The determination of value or valuation under any of the provision of this Code shall be made by the Building Official. The value to be used in computing the building permit and building plan review fees shall be the total value of all construction work for which the permit is issued, as well as all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire-extinguishing systems and any other permanent equipment.

109.3 Plan Review Fees. When submittal documents are required by Section 105.3, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be established by Resolution of the City Council.

The plan review fees specified in this subsection are separate fees from the permit fees specified in Section 107.2 and are in addition to the permit fees.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section 106.3.4.2, an additional plan review fee shall be charged at the rate shown in the fee schedule.

109.4 Investigation Fees: Work without a Permit.

109.4.1 Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation shall be made before a permit may be issued for such work.

109.4.2 Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code. The minimum investigation fee shall be the same as the minimum fee set forth in the fee schedule. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

109.5 Fee Refunds. The building official may authorize refunding of any fee paid hereunder which was erroneously paid or collected.

The building official may authorize refunding of not more than 80 percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.

The building official may authorize refunding of not more than 80 percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan reviewing is done.

The building official shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment. No refund will be made for less than \$25.00. Permit and plan check fees will be refunded in their entirety when collected in error

E. Chapter 1 Division II – Section 110.7 is hereby added to read as follows:

Section 110.7 Reinspections. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

This subsection is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or reinspection.

Reinspection fees may be assessed when the inspection record card is not posted or otherwise made available on the work site; the approved plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the Building Official.

To obtain a reinspection, the applicant shall file an application therefore in writing upon a form furnished for that purpose and pay the reinspection fee as established by the City Council.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

F. Chapter 1 Division II – Section 111.3 is hereby amended to read as follows:

111.3 Temporary Certificate. If the Building Official finds that no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, he may issue a Temporary Certificate of Occupancy for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure. The application fee for such Temporary Certificate shall be as established by the City Council. The Temporary Certificate of Occupancy may be subject to such conditions as deemed necessary by the Building Official. The violation or failure of any such condition imposed shall be grounds for revocation of such Temporary Certificate of Occupancy.

G. Chapter 1 Division II – Section 113.4 is hereby added to read as follows:

113.4 Establishment. The City Council shall be the Board of Appeals.

H. Chapter 1 Division II – Section 114 is hereby amended to read as follows:

114 Violations.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy, or maintain any building or structure, or cause or permit the same to be done in violation of this Code.

Any person, firms, or corporation violating any of the provisions of this Code shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code is committed, continued, or permitted, and upon conviction of any such violation such person shall be punished by a fine of not more than one thousand dollars (\$1,000.00) or by imprisonment for not more than six (6) months, or by both such fine and imprisonment.

- I. Chapter 1 Division II – Section 117 is hereby added to read as follows:

SECTION 117 UNDERGROUND UTILITIES REQUIRED.

The Building Official shall, as a condition precedent to the issuance of a Building Permit, require all utility services located within the exterior boundary lines of lot or parcel of property to be installed underground if:

1. The property is to be developed with a new or relocated main building;
2. The remodeling, alteration, or addition to an existing main building exceeds fifty (50) percent of the value and/or area of the existing building;
3. A residential building or use is converted to any nonresidential use or purpose.

For purposes of this section, the term “main building” shall mean a building in which is conducted the principal use of the lot or building site on which it is located. If it is determined that practical difficulties, or unreasonable hardships inconsistent with the purposes of this chapter and unique to a particular parcel of property, would result from the literal interpretation of this section, the Building Official may waive, modify, or delay the imposition of any undergrounding requirement imposed pursuant to the section upon written application of any affected property owner. The Building Official shall notify the applicant of his decision in writing by certified mail. If the Building Official determines to delay the installation of required underground utilities, he may require a recorded agreement guaranteeing the future performance of the work, together with adequate performance security enforceable by the City in

the form of a cash deposit, bond, letter of credit, or other instrument or security satisfactory to the City Attorney.

For purposes of this section, appurtenances and associated equipment such as, but not limited to, surface-mounted transformers, pedestal-mounted terminal boxes and meter cabinets, and concealed ducts in an underground system, may be placed above ground.

Any person dissatisfied with the decision of the Building Official may file an appeal pursuant to Section 2.04.100 to 2.04.130 of the Lake Forest Municipal Code.

The owner or developer of the property is responsible for complying with requirements of this section and shall provide all necessary facilities on the property to receive such service from the supplying utilities.

- J. Section 202, General Definitions, is hereby revised by adding "Flow-line" and "Hazardous Fire Area", and revising "High-Rise Building" as follows:

202 General Definitions

HIGH-RISE BUILDING. In other than Group I-2 occupancies "high-rise buildings" as used by this Code:

1. "Existing high-rise structure" means a high-rise structure, the construction of which commenced or completed prior to July 1, 1974
 2. "High-rise structure" means every building of any type of construction or occupancy having floor used for human occupancy located more than 55 feet above the lowest floor level having building access except buildings used as hospitals as defined by the Health and Safety Code Section 1250.
 3. "New high-rise structure" means a high-rise structure, the construction of which commenced on or after July 1, 1974.
- K. Section 202 of the California Building Code, Definitions, is hereby amended by adding the following language to read as follows:

FLOOR AREA. FIRE SPRINKLER. For the purpose of calculating square footage for application of fire sprinkler requirements, the floor area shall be determined in accordance with the California Building Code definition for "Floor Area, Gross". For Group R-3 occupancies portions of the structure not

required to be protected by the automatic sprinkler system do not need to be included into the floor area calculation.

- L. Section 403 High-Rise Buildings of the California Building Code is hereby revised as follows:

Section 403 HIGH-RISE BUILDINGS HAVING OCCUPIED FLOORS LOCATED MORE THAN 55 FEET ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS AND GROUP I-2 OCCUPANCIES HAVING OCCUPIED FLOORS LOCATED MORE THAN 75 FEET ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS

- M. Section 403.1 of the California Building Code, Applicability, is hereby revised as follows:

403.1 Applicability. New high-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access and new Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access shall comply with Sections 403.2 through 403.6.

- N. 403.1.1 of the California Building Code, Definitions, is hereby revised as follows:

HIGH-RISE BUILDING. In other than Group I-2 occupancies "high-rise buildings" as used by this Code:

1. "Existing high-rise structure" means a high-rise structure, the construction of which commenced or completed prior to July 1, 1974
2. "High-rise structure" means every building of any type of construction or occupancy having floor used for human occupancy located more than 55 feet above the lowest floor level having building access (see Section 403.1.2), except buildings used as hospitals as defined by the Health and Safety Code Section 1250.
3. "New high-rise structure" means a high-rise structure, the construction of which commenced on or after July 1, 1974

- O. Section 403.4.7.2 of the California Building Code, Standby power loads, is amended by deleting #2 and renumber as follows:

[F] 403.4.7.2 Standby power loads. The following are classified as standby

power loads:

1. Power and lighting for the fire command center required by Section 403.4.5;
2. Standby power shall be provided for elevators in accordance with Sections 1007.4, 3003, 3007, and 3008.

- P. Section 403.4.8.1, of the California Building Code, Emergency power loads is hereby amended by adding the following:

[F] 403.4.8.1 Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10;
2. Elevator car lighting;
3. Emergency voice/alarm communications system;
4. Automatic fire detection systems;
5. Fire alarm systems;
6. Electrically powered fire pumps; and
7. Ventilation and automatic fire detection equipment for smokeproof enclosures.

- Q. SECTION 412.2 of the California Building Code, Definitions, is hereby amended by adding the following definitions:

APPROACH-DEPARTURE PATH. The flight path of the helicopter as it approaches or departs from the landing pad.

EMERGENCY HELICOPTER LANDING FACILITY (EHLF). A landing area on the roof of a building that is not intended to function as a heliport or helistop but is capable of accommodating fire or medical helicopters engaged in emergency operations.

SAFETY AREA. A defined area surrounding the landing pad which is free of obstructions.

TAKEOFF AND LANDING AREA. The combination of the landing pad centered within the surrounding safety area.

- R. Section 412.7 of the California Building Code is hereby amended by adding Sections 412.7.5 through 412.7.5.13 as follows:

412.7.5. Emergency Helicopter Landing Facility. Emergency Helicopter

Landing Facility (EHLF) shall be constructed as specified in Section 412.7.5.1 through 412.7.5.13.

412.7.5.1 General. Every building of any type of construction or occupancy having floors used for human occupancy located more than 75 ft above the lowest level of the fire department vehicle access shall have a rooftop emergency helicopter landing facility (EHLF) in a location approved by the fire code official for use by fire, police, and emergency medical helicopters only.

412.7.5.2 Rooftop Landing Pad. The landing pad shall be 50 ft. x 50 ft. or a 50 ft. diameter circle that is pitched or sloped to provide drainage away from access points and passenger holding areas at a slope of 0.5 percent to 2 percent. The landing pad surface shall be constructed of approved non-combustible, nonporous materials. It shall be capable of supporting a helicopter with a maximum gross weight of 15,000 lbs. For structural design requirements, see California Building Code.

412.7.5.3 Approach-Departure Path. The emergency helicopter landing facility shall have two approach-departure paths separated in plan from each other by at least 90 degrees. No objects shall penetrate above the approach-departure paths. The approach-departure path begins at the edge of the landing pad, with the same width or diameter as the landing pad and is a rising slope extending outward and upward at a ratio of eight feet horizontal distance for every one foot of vertical height.

412.7.5.4 Safety Area. The safety area is a horizontal plane level with the landing pad surface and shall extend 25 ft in all directions from the edge of the landing pad. No objects shall penetrate above the plane of the safety area.

412.7.5.5 Safety Net. If the rooftop landing pad is elevated more than 30 in. (2'-6") above the adjoining surfaces, a 6 ft in wide horizontal safety net capable of supporting 25 lbs/psf shall be provided around the perimeter of the landing pad. The inner edge of the safety net attached to the landing pad shall be slightly dropped (greater than 5 in. but less than 18 in.) below the pad elevation. The safety net shall slope upward but the outer safety net edge shall not be above the elevation of the landing pad.

412.7.5.6 Take-off and Landing Area. The takeoff and landing area shall be free of obstructions and 100 ft x 100 ft. or 100 ft. diameter.

412.7.5.7 Wind Indicating Device. An approved wind indicating device shall be provided but shall not extend into the safety area or the approach-

departure paths.

412.7.5.8 Special Markings. The emergency helicopter landing facility shall be marked as indicated in Figure 412.7.5.8

412.7.5.9 EHLF Exits. Two stairway exits shall be provided from the landing platform area to the roof surface. For landing areas less than 2,501 square feet in area, the second exit may be a fire escape or ladder leading to the roof surface below. The stairway from the landing facility platform to the floor below shall comply with CFC 1009.4.2 for riser height and tread depth. Handrails shall be provided, but shall not extend above the platform surface.

412.7.5.10 Standpipe systems. The standpipe system shall be extended to the roof level on which the EHLF is located. All portions of the EHLF area shall be within 150 feet of a 2.5-inch outlet on a Class I or III standpipe.

412.7.5.11 Fire extinguishers. A minimum of one portable fire extinguisher having a minimum 80-B:C rating shall be provided and located near the stairways or ramp to the landing pad. The fire extinguisher cabinets shall not penetrate the approach-departure paths, or the safety area. Installation, inspection, and maintenance of extinguishers shall be in accordance with the CFC, Section 906.

412.7.5.13 EHLF. Fueling, maintenance, repairs, or storage of helicopters shall not be permitted.

- S. Adopt Chapter 9 of the California Building Code, Fire Protection Systems, in its entirety with the following amendments:

SECTION 903.2 Where required is hereby revised as follows:

[F] 903.2 Where required. Approved automatic sprinkler systems in buildings and structures shall be provided in the following locations:

1. New buildings: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.12, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area, as defined in Section 502.1, exceeds 5,000 square feet (465 m²), or more than two stories in height, regardless of fire areas or allowable area.

Exception: Group R-3 occupancies. Group R-3 occupancies shall comply with Section 903.2.8.

SECTION 903.2, Group R is hereby revised as follows:

[F] 903.2.8. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area as follows:

New buildings: An automatic sprinkler system shall be installed throughout all new buildings.

Existing Buildings: An automatic sprinkler system shall be installed throughout any existing building when the floor area of the Alteration within any two year period exceeds 50% of area of the existing structure and the building area exceeds 5,500 ft². When the cost of installing an approved automatic sprinkler system exceeds 5% of the cost of the Alteration, with the approval of the fire code official, the required automatic sprinkler system may be omitted.

Exceptions to existing buildings requirement:

1. Detached buildings containing two or less dwelling units with less than 5,500 ft² (279 m²) (including attached U-occupancy garages),
2. Group R-3.1 occupancies not housing bedridden clients, not housing nonambulatory clients above the second floor, and less than 5,500 square feet.
3. Pursuant to Health and Safety Code Section 13113 occupancies housing ambulatory children only, none of whom are mentally ill or mentally retarded, and building or portions thereof housing such children are not more than two stories in height, and thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code Section 13143.6 occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

T. SECTION 905.4 of the California Building Code, Location of Class I standpipe hose connections, is hereby amended by adding items 7 and 8 as follows:

[F] 905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official. See Section 909.20.3.2 for additional provisions in smokeproof enclosures.

2. On each side of the wall adjacent to the exit opening of a horizontal exit.

Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a nozzle attached to 100 feet (30 480 mm) of hose, as measured along the path of travel, a hose connection shall not be required at the horizontal exit.

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

Exception: Where floor areas adjacent to an exit passageway are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.
6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations. The distance from a hose connection shall be measured along the path of travel.

7. The centerline of the 2.5 inches (64 mm) outlet shall be no less than 18 inches (457 mm) above and no more than 24 inches (610 mm) above the finished floor.
8. Every new building with any horizontal dimensions greater than 300 feet (91 440 mm) shall be provided with either access doors or a 2.5 inches (64 mm) outlets so that all portions of the building can be reached with 150 feet (45 720 mm) of hose from an access door or hose outlet. Required access doors shall be located in the exterior of the building and shall be accessible without the use of a ladder. The door dimensions shall be not less than 3 feet (914 mm) in width, and not less than 6 feet 8 inches (2032 mm) in height. These doors are for fire department access only.

U. SECTION 907.2.13 of the California Building Code, High-rise buildings, is hereby revised as follows:

[F] 907.2.13 High-rise buildings HAVING OCCUPIED FLOORS LOCATED MORE THAN 55 FEET ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access. High-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access shall be provided with an automatic smoke detection in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412
2. Open parking garages in accordance with Section 406.3
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the International Building Code.
5. In Group I-2 and R-2.1 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the emergency voice/alarm communication system

- V. SECTION 907.3.1 of the California Building Code, Duct smoke detectors, is hereby amended as follows:

[F] 907.3.1 Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is installed. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the California Mechanical Code. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exception:

In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

- W. SECTION 907.5.2.2 of the California Building Code, Emergency voice/alarm communication system, is revised as follows.

[F] 907.5.2.2 Emergency voice/alarm communication system. Emergency voice/alarm communication system required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404. In high-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access, and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Exit stairways.
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.
5. Dwelling Units in apartment houses.
6. Hotel guest rooms or suites.

Exception: In Group I-1 and R-2.1 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

- X. Section 907.6.3.2 of the California Building Code, High-rise buildings, is hereby revised as follows.

907.6.3.2 High-rise buildings. High-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access, a separate zone by floor shall be provided for all of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler waterflow devices.
3. Manual fire alarm boxes
4. Other approved types of automatic detection devices or suppression systems.

- Y. SECTION 910.3.2.2 of the California Building Code, Sprinklered buildings, is hereby amended as follows:

[F] 910.3.2.2 Sprinkler buildings. Where installed in buildings provided with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically by actuation of a heat-responsive device rated at least 100° F above the operating temperature of the sprinkler unless otherwise approved.

- Z. Table 1505.1 is hereby amended, by the deletion of Table 1505.1 and the addition of a new Table 1505.1 thereto, to read as follows:

TABLE 1505.1

MINIMUM ROOF COVERING CLASSIFICATIONS

TYPES OF CONSTRUCTION

IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
B	B	B	B	B	B	B	B	B

- AA. Section 1505.1.3 is hereby amended to read as follows:

1505.1.3 Roof coverings within all other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class B."

- BB. Section 1614.1 General. The text of ASCE 7 shall be modified as indicated in this Section.

Section 1614.1.1 Minimum seismic base shear. ASCE 7, Section 12.8.1.1. Modify ASCE 7 Section 12.8.1.1 by deleting Equation 12.8-5 and amending Equation 12.8-5 to read:

$$C_s = 0.044 \text{ SDS I} \quad (\text{Eq. 12.8-5})$$

- CC. Section 3109.4.4.1 is hereby amended to add the following definition.

PRIVATE POOL, is any constructed pool, permanent or portable, which is intended for non-commercial use as a swimming pool by not more than three owner families and their guests.

- DD. Section 3109.4.4.2 is hereby amended by replacing the first paragraph in its entirety to read as follows:

Section 3109.4.4.2 Construction permit; safety features required. Commencing, January 1, 1998 except as provided in Section 3109.4.4.5, whenever a construction permit is issued for 1) the construction of a new private pool or spa at a residence; 2) a remodel of a private pool or spa at a residence; or 3) the remodel or addition to a residence which results in direct access from the house to the swimming pool, it shall have an enclosure complying with 3109.4.4.3 and, it shall be equipped with at least one of the following safety features:"

- EE. Chapter 35 is adopted in its entirety with the following amendments:

NFPA 13, 2010 Edition, Installation of Sprinkler Systems is hereby amended as follows:

Section 6.8.3 is hereby revised as follows:

6.8.3 Fire department connections (FDC) shall be of an approved type. The

FDC shall contain a minimum of two 2 ½" inlets. The location shall be approved and be no more than 150 feet from a public hydrant. The size of piping and the number of inlets shall be approved by the chief. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red. When the fire sprinkler density design requires 500 gpm (including inside hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided. FDC may be located within 150 feet of a private fire hydrant when approved by the chief.

Section 8.3.3.1 is hereby revised as follows:

8.3.3.1. When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Sprinklers in light hazard occupancies shall be one of the following:

- a. Quick-response type as defined in 3.6.4.7
- b. Residential sprinklers in accordance with the requirements of 8.4.5
- c. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
- d. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 8.17.1.1.1 is hereby revised as follows:

8.17.1.1.1 Residential Waterflow Alarms. A local water-flow alarm shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies not requiring a fire alarm system by the California Fire Code shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 DBA above the average ambient sound or a minimum of 75 DBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Section 8.17.2.4.6 is hereby revised as follows:

8.17.2.4.6 Fire department connections shall be on the street side of buildings and shall be located and arranged so that they are immediately adjacent to the approved fire department access road and that hose lines can be readily and conveniently attached to the inlets without interference from nearby objects including buildings, fence, posts, or other fire department connections.

Section 11.1.1.2 is hereby added as follows:

11.1.1.2 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction/s in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve "G". Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the Fire Code Official:

- a. Subtract the project site elevation from the low water level for the appropriate pressure zone and multiplying the result by 0.433;
- b. Use a maximum of 40 psi, if available;
- c. Utilize the Orange County Fire Authority water-flow test form/directions to document a flow test conducted by the local water agency or a professional engineer licensed in the State of California. The result shall be adjusted in accordance with the graduated scaled found in the guideline.

Section 22.1.3 (43) is hereby revised as follows:

22.1.3 (43) Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in the flow tests shall be shown. Flow test shall be completed within six months of the plan submittal to the authority having jurisdiction.

- FF. NFPA 13R 2010 Edition Installation of Sprinkler System in Residential Occupancies up to and Including Four Stories in Height is hereby amended as follows:

Section 6.16.1 is hereby revised as follows:

6.16.1 A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies containing less than the number of stories, dwelling units or occupant load specified in Section 907.2.8 of the 2010 California Fire Code as requiring a fire alarm system shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 dBA above the average ambient sound or a minimum of 75 dBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

There shall also be a minimum of one exterior alarm indicating device, listed for outside service and audible from the access roadway that serves that building.

Section 6.6.6 is hereby revised as follows:

Section 6.6.6 Sprinklers shall not be required in penthouse equipment rooms, elevator machine rooms, concealed spaces dedicated exclusively to containing only dwelling unit ventilation equipment, crawl spaces, floor/ceiling spaces, noncombustible elevator shafts where the elevator cars comply with ANSI A17.1, Safety Code for Elevators and Escalators, and other concealed spaces that are not used or intended for living purposes or storage and do not contain fuel fired equipment.

Section 6.6.9 is hereby added as follows:

6.6.9 Sprinklers shall not be required in attics that are not located over dwelling units. When attics are separated by unit, each unit's attic space may be protected per NFPA 13D Section 8.6.4.2. All other attics shall be protected per NFPA 13.

- GG. NFPA 13D 2010 Edition Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 4.1.5 is hereby added as follows:

4.1.5 Stock of Spare Sprinklers

Section 4.1.5.1 is hereby added as follows:

4.1.5.1. A supply of at least two sprinklers for each type shall be maintained on the premises so that any sprinklers that have operated or been damaged in any way can be promptly replaced.

Section 4.1.5.2 is hereby added as follows:

4.1.5.2 The sprinklers shall correspond to the types and temperature ratings of the sprinklers in the property.

Section 4.1.5.3 is hereby added as follows:

4.1.5.3 The sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed 100 °F (38°C).

Section 4.1.5.4 is hereby added as follows:

4.1.5.4 A special sprinkler wrench shall be provided and kept in the cabinet to be used in the removal and installation of sprinklers. One sprinkler wrench shall be provided for each type of sprinkler installed.

Section 7.1.2 is hereby revised as follows:

7.1.2 The system piping shall not have a separate control valve unless supervised by a central station, proprietary or remote station alarm service.

Section 7.3 Pressure Gauges is hereby deleted and substituted with the following:

Section 7.3.1 is hereby deleted in its entirety and replaced as follows:

7.3.1 At least one water pressure gauge shall be installed on the riser assembly.

Section 7.6 is hereby deleted in its entirety and replaced as follows:

7.6 Alarms Exterior alarm indicating device shall be listed for outside service and audible from the street from which the house is addressed. Exterior audible devices shall be placed on the front or side of the structure and the location subject to final approval by the fire code official. Additional interior alarm devices shall be required to provide audibility throughout the structure. Sound levels in all sleeping areas with all intervening doors closed shall be a minimum of 15 dBA above the average ambient sound level but not less than 75 dBA. Audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Exception:

1. When an approved water flow monitoring system is installed, interior audible devices may be powered through the fire alarm control panel.
2. When smoke detectors specified under CBC Section 310.9 are used to sound an alarm upon waterflow switch activation.

Section 8.6.4.2 is hereby added as follows:

8.6.4.2 All attics shall be protected with an intermediate temperature quick response sprinkler which shall be located to protect attic penetrations created by the access scuttles or mechanical equipment

HH. NFPA 14, 2007 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 6.4.5.4.1 is hereby deleted in its entirety and replaced as follows:

6.4.5.4.1 The fire department connection shall have a minimum of two 2 ½ inches, internal threaded (NHS) inlets. Additional inlets shall be provided on a 250 GPM per inlet ratio to meet the system demand. The inlets shall be provided with approved caps to protect the system from entry of debris. The location of the FDC shall be approved and be no more than 150 feet from a public hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red.

Section 7.3.1.1 is hereby is deleted in its entirety and replaced as follows:

7.3.1.1 Hose Connection Height Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches, or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet

or more than 5 feet above the finished floor.

II. NFPA 24, 2010 Edition, Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 5.9.1.3 is hereby revised as follows:

5.9.1.3 The fire department connection shall be of an approved type and contain a minimum of two 2 ½ inch inlets. The location shall be approved and be no more than 150 feet from a public fire hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. The supply pipe shall be painted OSHA safety red.

Section 5.9.1.3.1 is hereby added as follows:

5.9.1.3.1 When the sprinkler density design is 500 gpm (including the interior hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided.

Section 5.9.1.3.2 is hereby added as follows:

5.9.1.3.2 The fire department connection (FDC) may be located within 150 feet of a private fire hydrant provided the FDC connects down-stream of an aboveground sprinkler system check valve.

6.2.11 (5) is hereby deleted without replacement;

6.2.11 (6) Control valves in a one-hour fire-rated room accessible from the exterior.

6.3.3 All post indicator valves controlling fire suppression water supplies shall be painted OSHA red.

10.1.6.3 All ferrous pipe shall be coated and wrapped. Joints shall be coated and wrapped after assembly. All fittings shall be protected with a loose 8-mil polyethylene tube. The ends of the tube shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception: 316 Stainless Steel pipe and fittings

Section 10.3.5.2 is hereby revised as follows:

10.3.5.2 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material, prior to poly-tube, and after installation.

Section 10.3.5.3 is hereby added as follows:

10.3.5.3 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.6.3.1 is hereby revised as follows:

10.6.3.1 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 18 inches, as measured from the interior of the exterior wall. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints or comply with 10.6.2.

Section 10.6.5 is hereby revised as follows:

10.6.5 Pipe Joints shall not be located under foundation footings. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints.

JJ. NFPA 72, 2010 Edition, National Fire Alarm Code, is hereby amended as follows:

14.2.1.2.3 If a defect or malfunction is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner's designated representative and fire code official shall be informed of the impairment in writing within 24 hours.

23.8.2.2 Except as permitted in 23.8.2.3, the fire alarm systems components shall be permitted to share control equipment or shall be able to operated as stand-alone subsystems, but in any case, they shall be arranged to function as a single system and send a single signal to a central, remote, or proprietary station.

Section 23.8.2.3 is hereby deleted without replacement.

26.2.3.1 Supervising station customers or clients and fire code official shall be notified in writing within 7 days of any scheduled change in service that results in signals from their property being handled by a different supervising station facility.

SECTION 3. Chapter 8.06 of the Lake Forest Municipal Code is hereby added in its entirety to read as follows:

"Chapter 8.06 California Residential Code

8.06.001 Adoption of California Residential Code

California Residential Code, 2010 Edition, based on the 2009 International Residential, together with the amendments provided in this chapter, is hereby adopted by reference as the Residential Code of the City of Lake Forest, regulating the construction of one- and two-family residential dwellings within the City, of which code not less than one (1) copy has been made and is now filed in the office of the City Clerk; and the same is adopted and incorporated as fully as is set forth at length herein.

8.06.020 California Residential Code amended.

- A. Section R105.3.2 of the California Residential Code is amended to read as follows

R105.3.2 Expiration of Plan Review. Applications for which no permit is issued within 180 days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action by the applicant for a period not exceeding 180 days on request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay the required fees.

- B. Section R105.5 of the California Residential Code is amended to read as follows:

Section R105.5 Expiration. Every permit issued by the Building Official under the provisions of this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within one hundred eighty (180) days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of one hundred eighty (180) days. Before such work can be recommenced a new permit shall be first obtained to do so, and the fee therefore shall be one-half the amount required for a new permit for such work; provided, however, that:

1. No changes have been made or will be made in the original plans and specifications for such work; and
2. Such suspension or abandonment has not exceeded one (1) year; and
3. A reendorsement of the compliance of the plans with the applicable regulations, by the Director of Development Services, shall be obtained.

In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee.

Any permittee holding an unexpired permit may apply for an extension of the time within which work may commence under that permit when the permittee is unable to commence work within the time required by this section for good and satisfactory reasons. The Building Official may extend the time for action by the permittee for a period not exceeding one hundred eighty (180) days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. Such written request shall be submitted no later than sixty (60) days after expiration of the permit.

- C. Section R108 of the California Residential Code is amended to read as follows:

SECTION R108 FEES

108.1 Payment and schedule of fees. A permit shall not be valid until the fees as established by Resolution of the City Council have been paid at time of issuance. Not shall an amendment to a permit be released until the additional fee, if any, has been paid. On buildings, structures, electrical, gas, mechanical, and plumbing systems or alternations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

108.2 Plan Review Fees. When submittal documents are required by Section 105.3, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be established by Resolution of the City Council.

The plan review fees specified in this subsection are separate fees from the permit fees specified in Section 107.2 and are in addition to the permit fees.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section 106.3.4.2, an additional plan review fee shall be charged at the rate shown in the fee schedule.

108.3 Permit Fees. The determination of value or valuation under any of the provision of this Code shall be made by the Building Official. The value to be used in computing the building permit and building plan review fees shall be the total value of all construction work for which the permit is issued, as well as all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire-extinguishing systems and any other permanent equipment.

108.4 Related Fees. The payment of the fee for the construction, alternation, removal, or demolition for work done in connection with or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

108.5 Fee Refunds. The building official may authorize refunding of any fee paid hereunder which was erroneously paid or collected.

The building official may authorize refunding of not more than 80 percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.

The building official may authorize refunding of not more than 80 percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan reviewing is done.

The building official shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment. No refund will be made for less than \$25.00. Permit and plan check fees will be refunded in their entirety when collected in error

108.6 Investigation Fees: Work without a Permit.

108.6.1 Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a

special investigation shall be made before a permit may be issued for such work.

108.6.2 Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code. The minimum investigation fee shall be the same as the minimum fee set forth in the fee schedule. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

- D. Section R110.4 of the California Residential Code is amended to read as follows:

110.4 Temporary Certificate. If the Building Official finds that no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, he may issue a Temporary Certificate of Occupancy for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure. The application fee for such Temporary Certificate shall be as established by the City Council. The Temporary Certificate of Occupancy may be subject to such conditions as deemed necessary by the Building Official. The violation or failure of any such condition imposed shall be grounds for revocation of such Temporary Certificate of Occupancy.

- E. Section R110.5 is hereby added to the California Residential Code is to read as follows:

Section 110.5 Reinspections. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

This subsection is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or reinspection.

Reinspection fees may be assessed when the inspection record card is not posted or otherwise made available on the work site; the approved plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the Building Official.

To obtain a reinspection, the applicant shall file an application therefore in writing upon a form furnished for that purpose and pay the reinspection fee as established by the City Council.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

- F. Section R112.3 of the California Residential Code is amended to read as follows:

R112.3 Establishment. The City Council shall be the Board of Appeals.

- G. Section R113 of the California Residential Code is amended to read as follows:

R113.1 Violations.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy, or maintain any building or structure, or cause or permit the same to be done in violation of this Code.

Any person, firms, or corporation violating any of the provisions of this Code shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code is committed, continued, or permitted, and upon conviction of any such violation such person shall be punished by a fine of not more than one thousand dollars (\$1,000.00) or by imprisonment for not more than six (6) months, or by both such fine and imprisonment.

- H. Section R202, General Definitions, is hereby revised by adding "Flow-line" and "Hazardous Fire Area" as follows:

R202 General Definitions

FLOW-LINE. is the lowest continuous elevation on a rolled curb defined by the path traced by a particle in a moving body of water at the bottom of the rolled curb.

HAZARDOUS FIRE AREA. Includes all areas identified within Section 4906.2 and other areas as determined by the Fire Code Official due to the

presence of combustible vegetation, or the proximity of the property to an area that contains combustible vegetation.

- I. Table R301.2(1) is revised to read:

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY ^f	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^e	ICE BARRIER UNDERLAYMENT REQUIRED ⁿ	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^a (mph)	Topographic effects ^k		Weathering ^a	Frost line Depth ^b	Termite ^c					
Zero	85	No	D ₂ or E	Negligible	12-24"	Very Heavy	43	No	See Exhibit B	0	60

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- b. The frost line depth may require deeper footings than indicated in Figure 403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. Temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
- h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°)" at www.ncdc.noaa.gov/fpsf.html.

- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)" at www.ncdc.noaa.gov/fpsf.html.
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

J. Section R313.1 is modified by deleting it in its entirety and replacing it with the following:

R313.1 Townhouse automatic fire sprinklers systems. An automatic residential fire sprinkler system installed in Townhouses as follows:

New buildings: An automatic sprinkler system shall be installed throughout all new buildings.

Existing Buildings: An automatic sprinkler system shall be installed throughout any existing building when the floor area of the Alteration within any two year period exceeds 50% of area of the existing structure and the building area exceeds 5,500 ft². When the cost of installing an approved automatic sprinkler system exceeds 5% of the cost of the Alteration, with the approval of the fire code official, the required automatic sprinkler system may be omitted.

K. Section R313.2 is modified by deleting it in its entirety and replacing it with the following:

R313.2 One- and two-family dwellings automatic fire sprinklers systems. An automatic residential fire sprinkler system installed in one- and two-family dwellings as follows:

New buildings: An automatic sprinkler system shall be installed throughout all new buildings.

Existing Buildings: An automatic sprinkler system shall be installed throughout any existing building when the floor area of the Alteration within any two year period exceeds 50% of area of the existing structure and the building area exceeds 5,500 ft². When the cost of installing an approved automatic sprinkler system exceeds 5% of the cost of the Alteration, with the approval of the fire code official, the required automatic sprinkler system may be omitted.

Exceptions to existing buildings requirement:

1. Detached buildings containing two or less dwelling units with less than 5,500 ft² (279 m²) (including attached U-occupancy garages),
2. Group R-3.1 occupancies not housing bedridden clients, not housing nonambulatory clients above the second floor, and less than 5,500 square feet.
3. Pursuant to Health and Safety Code Section 13113 occupancies housing ambulatory children only, none of whom are mentally ill or mentally retarded, and building or portions thereof housing such children are not more than two stories in height, and thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code Section 13143.6 occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

L. Section R403.1.3 is modified by deleting the exception for masonry stem walls:

In Seismic Design Categories D⁰, D¹, and D² masonry stem walls without solid grout and vertical reinforcing are not permitted.

~~Exception: in detached one and two family dwellings which are three stories or less in height and constructed with stud bearing walls, plain concrete footings without longitudinal reinforcement supporting walls and isolated plain concrete footings supporting columns or pedestals are permitted.~~

M. Section R405.1 is modified by deleting the exception for fountain drains, as follows:

. . . at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.

~~Exception: A drainage system is not required with the foundation is installed on well drained ground or sand-gravel mixture soils according to the Unified Soils Classification System, Group 1 Soils, as detailed in Table R405.1.~~

N. Section R902.1 is amended by revising it to allow only class A or B roofs as follows:

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. A minimum Class A or B roofing shall be installed in areas designated by this section. Classes A or B roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

Exceptions:

1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.

- O. Section R902.1.3 is amended by revising it to require a minimum Class B roof as follows:

R902.1.3 Roof coverings within all other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class B.

- P. Section R902.2, first paragraph is amended by revising it to allow only Class A or B treated wood roofs as follows:

R902.2 Fire-retardant-treated shingles and shakes. Fire-retardant-treated wood shakes and shingles are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 which are impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, and which have been qualified by UBC Standard 15-2 for use on Class A or B roofs.

Section 8.06.040 Chapter 44 amended.

California Residential Code, Chapter 44 Referenced Standards is adopted in its entirety with the following amendments:

NFPA 13, 2010 Edition, Installation of Sprinkler Systems is hereby amended as follows:

Section 8.17.2.4.6 is hereby revised as follows:

8.17.2.4.6 Fire department connections shall be on the street side of buildings and shall be located and arranged so that they are immediately adjacent to the approved fire department access road and that hose lines can be readily and conveniently attached to the inlets without interference from nearby objects including buildings, fence, posts, or other fire department connections.

Section 11.1.1.2 is hereby added as follows:

11.1.1.2 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction/s in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve "G". Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the Fire Code Official:

1. Subtract the project site elevation from the low water level for the appropriate pressure zone and multiplying the result by 0.433;
2. Use a maximum of 40 psi, if available;
3. Utilize the Orange County Fire Authority water-flow test form/directions to document a flow test conducted by the local water agency or a professional engineer licensed in the State of California. The result shall be adjusted in accordance with the graduated scaled found in the guideline.

Section 22.1.3 (43) is hereby revised as follows:

22.1.3 (43) Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in the flow tests shall be shown. Flow test shall be completed within six months of the plan submittal to the authority having jurisdiction.

NFPA 13R 2010 Edition Installation of Sprinkler System in Residential

Occupancies up to and Including Four Stories in Height is hereby amended as follows:

Section 6.16.1 is hereby revised as follows:

6.16.1 A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies containing less than the number of stories, dwelling units or occupant load specified in Section 907.2.8 of the 2010 California Fire Code as requiring a fire alarm system shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 dBA above the average ambient sound or a minimum of 75 dBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

There shall also be a minimum of one exterior alarm indicating device, listed for outside service and audible from the access roadway that serves that building.

Section 6.6.6 is hereby revised as follows:

Section 6.6.6 Sprinklers shall not be required in penthouse equipment rooms, elevator machine rooms, concealed spaces dedicated exclusively to containing only dwelling unit ventilation equipment, crawl spaces, floor/ceiling spaces, noncombustible elevator shafts where the elevator cars comply with ANSI A17.1, Safety Code for Elevators and Escalators, and other concealed spaces that are not used or intended for living purposes or storage and do not contain fuel fired equipment.

Section 6.6.9 is hereby added as follows:

6.6.9 Sprinklers shall not be required in attics that are not located over dwelling units. When attics are separated by unit, each unit's attic space may be protected per NFPA 13D Section 8.6.4.2. All other attics shall be protected per NFPA 13.

NFPA 13D 2010 Edition Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 4.1.5 is hereby added as follows:

4.1.5 Stock of Spare Sprinklers

Section 4.1.5.1 is hereby added as follows:

4.1.5.1. A supply of at least two sprinklers for each type shall be maintained on the premises so that any sprinklers that have operated or been damaged in any way can be promptly replaced.

Section 4.1.5.2 is hereby added as follows:

4.1.5.2 The sprinklers shall correspond to the types and temperature ratings of the sprinklers in the property.

Section 4.1.5.3 is hereby added as follows:

4.1.5.3 The sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed 100 °F (38°C).

Section 4.1.5.4 is hereby added as follows:

4.1.5.4 A special sprinkler wrench shall be provided and kept in the cabinet to be used in the removal and installation of sprinklers. One sprinkler wrench shall be provided for each type of sprinkler installed.

Section 7.1.2 is hereby revised as follows:

7.1.2 The system piping shall not have a separate control valve unless supervised by a central station, proprietary or remote station alarm service. Section 7.3 Pressure Gauges is hereby deleted and substituted with the following:

Section 7.3.1 is hereby deleted in its entirety and replaced as follows:

7.3.1 At least one water pressure gauge shall be installed on the riser assembly.

Section 7.6 is hereby deleted in its entirety and replaced as follows:

7.6 Alarms Exterior alarm indicating device shall be listed for outside service and audible from the street from which the house is addressed. Exterior audible devices shall be placed on the front or side of the structure and the

location subject to final approval by the fire code official. Additional interior alarm devices shall be required to provide audibility throughout the structure. Sound levels in all sleeping areas with all intervening doors closed shall be a minimum of 15 dBA above the average ambient sound level but not less than 75 dBA. Audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Exception:

1. When an approved water flow monitoring system is installed, interior audible devices may be powered through the fire alarm control panel.
2. When smoke detectors specified under CBC Section 310.9 are used to sound an alarm upon waterflow switch activation.

Section 8.6.4.2 is hereby added as follows:

8.6.4.2 All attics shall be protected with an intermediate temperature quick response sprinkler which shall be located to protect attic penetrations created by the access scuttles or mechanical equipment.

NFPA 14, 2007 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 6.4.5.4.1 is hereby deleted in its entirety and replaced as follows:

6.4.5.4.1 The fire department connection shall have a minimum of two 2 ½ inches, internal threaded (NHS) inlets. Additional inlets shall be provided on a 250 GPM per inlet ratio to meet the system demand. The inlets shall be provided with approved caps to protect the system from entry of debris. The location of the FDC shall be approved and be no more than 150 feet from a public hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red.

Section 7.3.1.1 is hereby is deleted in its entirety and replaced as follows:

7.3.1.1 Hose Connection Height Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches, or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2010 Edition, Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 5.9.1.3 is hereby revised as follows:

5.9.1.3 The fire department connection shall be of an approved type and contain a minimum of two 2 ½ inch inlets. The location shall be approved and be no more than 150 feet from a public fire hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. The supply pipe shall be painted OSHA safety red.

Section 5.9.1.3.1 is hereby added as follows:

5.9.1.3.1 When the sprinkler density design is 500 gpm (including the interior hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided.

Section 5.9.1.3.2 is hereby added as follows:

5.9.1.3.2 The fire department connection (FDC) may be located within 150 feet of a private fire hydrant provided the FDC connects down-stream of an aboveground sprinkler system check valve.

Section 6.2.11 (7) is hereby deleted without replacement.

Section 10.3.5.2 is hereby revised as follows:

10.3.5.2 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material, prior to poly-tube, and after installation.

Section 10.3.5.3 is hereby added as follows:

10.3.5.3 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.6.3.1 is hereby revised as follows:

10.6.3.1 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 18 inches, as measured from the interior of the exterior wall. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints or comply with 10.6.2.

Section 10.6.5 is hereby revised as follows:

10.6.5 Pipe Joints shall not be located under foundation footings. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints.

SECTION 4. Chapter 8.14 of the Lake Forest Municipal Code is hereby amended and restated in its entirety to read as follows:

“Chapter 8.14 California Electrical Code

8.14.001 Adoption of California Electrical Code

California Electrical Code, 2010 Edition, based on the 2008 National Electrical Code as published by the National Fire Protection Association, including Article 89, together with the amendments provided in this chapter, is hereby adopted by reference as the Electrical Code of the City of Lake Forest, regulating all installation, arrangement, alteration, repair, use and other operation of electrical wiring, connections, fixtures and other electrical appliances on premises within the City, of which code not less than one (1) copy has been made and is now filed in the office of the City Clerk; and the same is adopted and incorporated as fully as is set forth at length herein.

8.14.010 Section 89.108.5 amended.

Section 89.108.5.2 is hereby added to the California Electrical Code to read as follows:

89.108.5.2 Enforcement.

This Code is intended to be suitable for mandatory application by the City of Lake Forest over electrical installations within incorporated territory of the City. The Building Official of the City of Lake Forest shall have the authority for enforcement of the Code and the responsibility for making interpretations of the rules, for deciding upon the approval of equipment, materials and wiring methods as set forth in the California Electrical Code, and for the granting the special permission contemplated in a number of the rules.

The Building Official may waive specific requirements in this Code or permit alternate methods, where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety.

This Code may require new products, constructions, or materials which may not yet be available at the time the Code is adopted. In such event, the Authority Having Jurisdiction may permit the use of the products, constructions, or materials which comply with the most recent previous edition of this Code adopted by the jurisdiction.

8.14.020 Section 89.108.4.2 amended.

Section 89.108.4.2 of the California Electrical Code is amended to read as follows:

89.108.4.2 Fees.

- (a) Fees shall be established by resolution of the City Council.
- (b) The fees required in this section must be paid to the Building Official for each electrical installation for which a permit is required by this Code.
- (c) No permit shall be issued to any person, firm or corporation unless all fees for permits or additions to permits are paid in full. When an electrical plan is required to be submitted, a plan check fee shall be paid at the time of submittal.
- (d) Failure to take out a permit and to pay fees before commencing work shall be deemed evidence of violation of the provisions of this Code. Double the amount of permit fees shall be assessed for work commenced before a permit is issued.
- (e) Whenever any work for which a permit is required under the provisions of this Code has been commenced without the authorization of such permit, a special investigation may be required before a permit will be issued for such work. In addition to the regular permit fee and any penalty fee, the said special investigation fee which may be collected shall be established by resolution of the City Council.
- (f) Fees for annual permits shall be paid at the time such permits are issued. In addition, fees for all new work installed under such permit since the date of the previous inspection shall be paid, in accordance with the fee schedule, at the time the annual permit is issued.
- (g) Fees for additional inspections.
 - (1) Each permit shall be entitled to one (1) reinspection without additional charge, in addition to the required number of inspections established by the Building Official. On jobs which may be completely inspected on one (1) inspection trip, two (2) inspection trips will be allowed without additional charge for said second trip.

Exception: The number of inspection trips will not be limited on progress jobs; provided, however, that only one (1) inspection will be permitted for checking a correction. For the purpose of this section, progress jobs are those where circumstances beyond the control of the installer make it impossible for the electrical work to be completed at any specific time.
 - (2) If more inspection trips than specified in paragraph (g)(1) above are required due to the fault or error on the part of the installer or his

employees, an additional fee as established by resolution by the City Council may be required of the installer for each additional inspection trip.

(h) Refunds.

- (1) The Building Official shall collect such fees as are provided to be paid by this Code. He shall make no refunds on fees collected amounting to twenty-five dollars (\$25.00) or less, or on any plan checking fee or on any permit fee where one (1) year has elapsed from the date of issuance.
- (2) Refunds may be made to the permittee in the amount equal to eighty (80) percent of the permit fee paid where work authorized by said permit has not commenced.
- (3) Refunds may be made in an amount equal to one hundred (100) percent of the amount paid for each permit when a permit has been inadvertently issued outside the jurisdiction of the City or duplicate permits have been issued and two (2) fees have been collected for the same work.

8.14.030 Section 89.108.11 added.

Section 89.108.11 is hereby added to the California Electrical Code to read as follows:

89.108.11 Penalties. Any person, firm or corporation violating any of the provisions of this Code shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code is committed, continued or permitted; and upon conviction of any such violation such person shall be punished by a fine of not more than one thousand dollars (\$1,000.00) or by imprisonment for not more than six (6) months, or by both such fine and imprisonment."

SECTION 5. Chapter 8.16 of the Lake Forest Municipal Code is hereby amended and restated in its entirety to read as follows:

"Chapter 8.16 California Plumbing Code

8.16.001 Application of California Plumbing Code

California Plumbing Code, 2010 Edition, based on the 2009 Uniform Plumbing Code as published by the International Association Plumbing and Mechanical Officials, including Chapter 1, together with the amendments provided in this

chapter, is hereby adopted by reference as the Plumbing Code of the City of Lake Forest, regulating erection, installation, alteration, repair, relocation, replacement, maintenance or use of plumbing systems within the City, of which code not less than one (1) copy has been made and is now filed in the office of the City Clerk; and the same is adopted and incorporated as fully as is set forth at length herein.

Whenever the term "Authority Having Jurisdiction" is used in this Code, it shall mean the Building Official of the City.

Whenever the terms "Building Official" and "assistants" are used in this Code, they shall be construed to mean the Development Services Director for the City of Lake Forest or her designated representative.

8.16.010 Section 102.3 of Chapter 1 amended – Violation and Penalties

Section 102.3 of Chapter 1 of the Plumbing Code is hereby amended to read as follows:

Section 102.3 Violation and Penalties.

Any person, firm or corporation violating any of the provisions of this Code shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code is committed, continued or permitted; and upon conviction of any such violation such person shall be punished by a fine of not more than one thousand dollars (\$1,000.00) or by imprisonment for not more than six (6) months, or by both such fine and imprisonment.

8.16.020 Section 103.4 of Chapter 1 amended - Fees.

Section 103.4 of Chapter 1 of the Plumbing Code is hereby amended to read as follows:

Section 103.4 Fees

103.4 General. Fees shall be assessed in accordance with the provisions of this section.

103.4.1 Permit Fees. A fee as established by Resolution of the City Council shall be paid for each permit at the time of issuance.

Failure to pay fees and obtain a permit before commencing work shall be deemed a violation of this Code, except when it can be proven to the satisfaction of the Building Official that an emergency existed which made it impractical to first

obtain the permit. A violation shall result in an assessment of double permit fees for work done prior to permit issuance. Payment of a double fee shall not relieve any person from fully complying with the requirements of this Code nor from any other penalties prescribed herein.

For the purpose of this section, a sanitary plumbing outlet on or to which a plumbing fixture or appliance may be set or attached shall be construed to be a fixture. Fees for reconnection and retest of existing plumbing systems in relocated buildings shall be based on the number of plumbing fixtures, gas systems, water heaters, or other appliances involved.

When a permit has been obtained to connect an existing building or existing work to the public sewer or to a new private disposal facility, backfilling of private sewage disposal facilities abandoned consequent to such connection is included in the building sewer permit.

Section 103.4.2 Plan Review Fees.

When plans are required, a plan check fee as established by resolution of the City Council shall be paid at the time of submittal of such plans.

Section 103.4.3 Special investigation fee.

A special investigation may be required before a permit will be issued for work which has been started without first obtaining a permit. Except in the case of the emergency work, a fee as established by resolution of the City Council may be collected for such investigation. The special investigation fee shall be in addition to any regular or double permit fee.

No permit shall be issued when an investigation fee is due until such fee has been paid.

The payment of the investigation fee shall not exempt any person from compliance with the provisions of this Code nor from any penalty prescribed by law.

Reinspection fee. When any reinspection is required due to the failure of the permit holder, his agent or other responsible persons to comply with previous correction instructions, a fee as established by resolution of the City Council may be charged by the Building Official for each such reinspection. This fee shall be paid before any further inspections are made.

Section 103.4.4 Fee Refund.

Section 103.4.4.1 Refunds.

Permit fee refunds will be made in an amount equal to eighty (80) percent where work authorized by said permit has not commenced; except that no refund will be made for less than twenty-five dollars (\$25.00), and no refund will be made if one (1) year has elapsed from the date of permit issuance.

103.4.4.2 Plan check fee refunds will be made in an amount equal to eighty (80) percent if the request for such refund is received before the commencement of the first complete plan check; except that no refund will be made for less than twenty-five dollars (\$25.00), and no refund will be made if one (1) year has elapsed from the date of plan check fee payment.

103.4.4.3 Permit and plan check fees will be refunded in their entirety when inadvertently paid for a project outside the jurisdiction of the City or as duplicate fees, except that no refund will be made if one (1) year has elapsed from the date of payment.

SECTION 6. Chapter 8.20 of the Lake Forest Municipal Code is hereby amended and restated in its entirety to read as follows:

“Chapter 8.20 California Mechanical Code

8.20.001 Adoption of California Mechanical Code

California Mechanical Code, 2007 Edition, based on the 2009 Uniform Mechanical Code as published by the International Association Plumbing and Mechanical Officials, including Chapter 1, together with the amendments provided in this chapter, is hereby adopted by reference as the Mechanical Code of the City of Lake Forest, regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance of heating, ventilating, cooling, refrigeration systems, incinerators and other miscellaneous heat producing appliances, of which Code not less than one (1) copy has been made and is now filed in the office of the Clerk of the City; and the same is adopted and incorporated by reference as if set forth at length herein.

8.20.010 Section 115 amended.

Section 115 of the Mechanical Code is hereby amended to read as follows:

Section 115 Fees.

115.1 General. Fees shall be assessed in accordance with the provisions of this section.

115.2 Permit fees. A fee as established by Resolution of the City Council shall be paid for each permit at the time of issuance. Failure to pay fees and obtain a permit before commencing work shall be deemed a violation of this Code except when it can be proven to the satisfaction of the Building Official that an emergency existed which made it impractical to first obtain the permit. A violation shall result in an assessment of double permit fees for work done prior to permit issuance. Payment of a double fee shall not relieve any person from fully complying with the requirements of this Code nor from any other penalties prescribed herein.

115.3 Plan check fees. Replace first sentence with "When plans are required, a plan check fee as established by Resolution of the City Council shall be paid at the time of submittal of such plans."

115.4 Expiration of plan review. Application for which no permit is issued within one hundred eighty (180) days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action by the applicant for a period not exceeding one hundred eighty (180) days upon request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee.

115.5 Special investigation fees. A special investigation may be required before a permit will be issued for work which has been started without first obtaining a permit. Except in the case of emergency work, a fee as established by resolution of the City Council may be collected for such investigation. The special investigation fee shall be in addition to any regular or double permit fee. No permit shall be issued when an investigation fee is due until such fee has been paid. The payment of the investigation fee shall not exempt any person from compliance with all other provisions of this Code nor from any penalty prescribed by law.

115.6 Fee refunds.

115.6.1 Permit fee refunds will be made in an amount equal to eighty (80) percent where work authorized by said permit has not commenced, except that no refund will be made for less than twenty-five dollars (\$25.00), and no refund will be made if one (1) year has elapsed from the date of permit issuance.

115.6.2 Plan check fee refunds will be made in an amount equal to eighty (80) percent if the request for such refund is received before the commencement of

the first complete plan check, except that no refund will be made for less than twenty-five dollars (\$25.00), and no refund will be made if one (1) year has elapsed from the date of plan check fee payment.

115.6.3 Permit and plan check fees will be refunded in their entirety when inadvertently paid for a project outside the jurisdiction of the City of Lake Forest or as duplicate fees, except that no refund will be made if one (1) year has elapsed from the date of payment."

8.20.020 Section 116.6 amended.

The third and fourth paragraph of Section 116.6 of the Mechanical Code is hereby amended to read as follows:

To obtain reinspection, the applicant shall file an application therefor in writing upon a form furnished for that purpose and pay the reinspection fee as established by the City Council.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid."

SECTION 7. Upon the effective date of this Ordinance, all former ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance of the codes herein adopted by reference and any other ordinance in conflict herewith are hereby repealed and declared to be of no further force and effect.

SECTION 8. The City Council finds that this Ordinance is not subject to the California Environmental Quality Act (CEQA) pursuant to Sections 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15378) of the CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, because it has no potential for resulting in physical change to the environment, directly or indirectly.

SECTION 9. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance for any reason is held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance, and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 10. Adoption of this Ordinance includes the whole of each Uniform Standards Code, together with accumulative supplements, and associated standards referenced therein, including such portions as may be added by the provisions of this chapter, and except such portions as may be deleted or modified by the provisions of this chapter. One copy of said codes has been and is on file in the office of the Clerk of the Council of the City of Lake Forest.

SECTION 11. The City Clerk shall certify as to the adoption of this Ordinance and shall cause a summary thereof to be published within fifteen (15) days of the adoption and shall post a Certified copy of this Ordinance, including the vote for and against the same, in the Office of the City Clerk, in accordance with Government Code Section 36933.

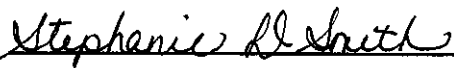
SECTION 12. This ordinance shall be effective thirty days after its adoption.

PASSED, APPROVED, AND ADOPTED this 2nd day of August 2011.



PETER HERZOG
MAYOR

ATTEST:



STEPHANIE D. SMITH, CMC
CITY CLERK

APPROVED AS TO FORM:



SCOTT C. SMITH
CITY ATTORNEY

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS
CITY OF LAKE FOREST)

I, Stephanie D. Smith, City Clerk of the City of Lake Forest, California do hereby certify that the foregoing Ordinance No. 231 was duly introduced and placed upon its first reading at a regular meeting of the City Council on the 5th day of July, 2011 and thereafter, said Ordinance was duly adopted and passed at a regular meeting of the City Council on the 2nd day of August, 2011, by the following vote, to wit:

AYES: COUNCIL MEMBERS: HERZOG, MCCULLOUGH, RUDOLPH,
TETTEMER, VOIGTS

NOES: COUNCIL MEMBERS: NONE

ABSENT: COUNCIL MEMBERS: NONE

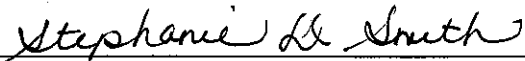
ABSTAIN: COUNCIL MEMBERS: NONE

Stephanie D. Smith

STEPHANIE D. SMITH, CMC
CITY CLERK

CERTIFICATION STATEMENT

I, Stephanie D. Smith, CMC, City Clerk of the City of Lake Forest, do hereby certify that the foregoing Ordinance is a true and correct copy of Ordinance No. 231, passed by the people of the City of Lake Forest, as declared by the City Council on the day and year set forth above, and published pursuant to law.


STEPHANIE D. SMITH, CMC
CITY CLERK